VII. *Characters of undescribed* Coleoptera, *brought from China by R. Fortune, Esq.* By W. Wilson Saunders, F.L.S., M.E.S. &c.

[Read 3rd May, 1852.]

The Entomology of China is yet but very imperfectly known, notwithstanding that the Collections of Entomologists have been abundantly supplied with specimens from that country during a long series of years. This peculiarity is chiefly to be attributed to the restrictive system of the Chinese, which, until within a very late period, prevented travellers and collectors from investigating the natural productions of this remarkable part of the world, and to the fact that the only entomological specimens to be obtained were those collected for sale by natives in the vicinity of Canton. The Chinaman, with little of the philosophy of Entomology about him, during his researches after insects kept chiefly in view the bright, beautiful, and large in size, his object being to please the eye only. He cared little about the less showy and small species, these not suiting his purpose; and we therefore find, in the Chinese collections, the same species occurring over and over again, and arranged into cases with the same precision and uniformity; the object being to make a pretty picture, by placing the specimens in curves or radiating lines having a common centre, and without any attempt at classification or putting allied forms together. Flies, bees, moths, and beetles, were placed side by side without distinction, and the species were only valued for their various hues and tints, and for their beauty and brightness; and the ruling idea in placing the specimens in the cases seems to have been to form a pretty and lively pattern, much in the same way that the worker in inlaid woods contrasts his materials to produce a pleasing effect. Collections so formed came to Europe of ancient date, and the species contained in them have been well described by Entomologists, exciting much interest from their great beauty and remarkable forms. This interest, however, gradually declined, from the want of novelty in the increasing number of specimens which found their way to Europe; so great, indeed, was the supply at last, and so little the demand, that a few years back more than 200 cases of these insects, each on the

average containing more than 100 specimens, could not find a purchaser at two shillings and sixpence per case.

These picture collections gave a pleasing idea of the entomological riches of China, containing, as they did, many beautiful species and peculiar forms; and the naturalist only longed for some chance which would increase his knowledge of an entomological fauna apparently so rich. From time to time, however, it may be remarked, a few specimens of Chinese insects, from localities far from Canton, were sent home, the result chiefly of government expeditions, and the exertions of missionaries, or of individuals to whom chance had given an opportunity of collecting. These extra sources were, however, not frequent, and the additional number of species obtained from them were very limited, but still full of interest.

The opening of the trade with China, a few years since, was the first opportunity which offered for obtaining a more extended knowledge of the natural productions of the country; and although at first jealousies and restrictions prevailed, these are now beginning to wear away, and we are at last, as far as Entomology is concerned, beginning to reap the advantages of the change.

The exertions of R. Fortune, Esq., a gentleman who has been able to penetrate into a very remarkable portion of the country, and whose very valuable and interesting narrative of his journey has just been published, has brought many new and remarkable species to light, adding greatly to our knowledge of the subject; and J. C. Bowring, Esq., our corresponding member at Hong Kong, whose sphere of action is more limited, has shown by the very interesting collections he has sent to this Society, that he is ably investigating the Entomology of his district, and doing much for the science.

It is, however, to the labours of the former gentleman that I am desirous of drawing the attention of the Society, as I purpose in this and other communications to describe a portion of the new species discovered by Mr. Fortune; and the remainder, excepting the *Lepidoptera*, I am happy to say, will be taken in hand by other Entomologists, who have offered their services, and who will do the subject full justice. I except the *Lepidoptera*, for a part of this order has been undertaken by Mr. G. R. Gray, who has read an interesting paper before the Zoological Society on the diurnal species; and it is to be hoped that the new species belonging to the nocturnal families may be described by one so well qualified for the task.

Much praise is due to Mr. Fortune for the attention he was able to give to the subject of insects during his interesting journey after plants and seeds of the tea shrub, for it must be borne in mind, that Entomology formed no portion of his arduous duties, and it was only a desire to make himself generally useful to the scientific world which induced him to collect insects, he well knowing how interesting they would prove to the Entomologist.

Mr. Fortune has kindly furnished me with a short account of the district from whence the greater portion of the specimens were obtained. He informs me, that this district is included between the parallels of 26° and 32° north latitude, on the east coast of China. Some were taken on the Island of Chusan and on other members of the Chusan Archipelago, but these form only a very small portion of the whole collection. Looking to a map of China, the country which he visited will be perceived at once. From the Islands of Chusan his researches were extended westward to 116° east longitude, that is to say, from about 122° to 116°; and hence it will be evident that he penetrated some considerable distance into the interior of the country. With the exception of the great plain of Shanghai, the country visited is of a mountainous character, running into elevations from 1000 to 2000 feet in height. The chief of the larger and more interesting species were obtained from this elevated district. Clay, slate, and granite, are the most abundant rocks in this hill country. The soil is generally of a reddish colour, composed of clay, sand, and vegetable matter, and much mixed with particles of the rocks of the country. The vegetation of the district appears to be luxuriant and abundant.

Turning now to the specimens which Mr. Fortune collected—they consisted of insects of all orders, among which were a considerable number of well-known forms, combined with others of very great rarity, and a large number of altogether new species. Of the latter, those described hereafter will fully establish the value of Mr. Fortune's researches; and I may mention, among insects of great rarity and interest, the following *Coleoptera* as particularly worthy of notice.

Dicronocephalus Wallichii ♂, which had only previously been obtained from Nepaul. A single ♂ specimen was procured, and this has all the characters of the Indian examples, except that the horns on the clypeus are less elongate, and but little curving upwards at the extremity. In this respect the specimen much resembles the figure in Gory and Pecheron's monograph of the *Cetoniadæ* (pl. 26, fig. 1). The female of this interesting and remarkable insect is still unknown, and should be carefully sought

after by collectors who are in a situation to clear up the difficulty.

Xylotrupes dichotoma, a fine scarabeus, with a remarkably branched and elevated horn arising from the head.

Oplophora Horsfieldii, Hope, figured in the Transactions of this Society, Vol. IV. Pl. I. fig. 1, a longicorn of great beauty, and large size. This specimen, described by Mr. Hope, was taken in Chusan, by Dr. Cantor.

I shall now proceed to the description of several new *Melitophila*, commencing with a very well marked and new genus of Goliath beetles.

Cosmiomorpha, new Genus. (Κόσμιος Μορφη.)

Head porrect, with the clypeus subquadrate, rather longer than broad, the sides parallel, the anterior margin slightly emarginate, the fore angles obliquely truncate, and the contour slightly elevated. *Mandibles* with the horny blade regularly lanceolate and pointed. *Maxillæ* with the upper lobe small, lanceolate, pointed, and incurved, externally covered with rigid hairs; the inner lobe ending above in an angulated point; palpi short. The mentum oblong, narrowed in front, and having the anterior margin slightly emarginate, with the labial palpi short.

Thorax very gibbous and rounded in front, about as long as broad, the lateral margins nearly parallel, slightly emarginate in the centre, the posterior margin straight, with the angles prominent.

Elytra rather broader than thorax, narrow and rounded at the apex; the shoulders prominent, with the lateral margin immediately behind slightly emarginate.

Legs long and slender, the anterior pair in the ♂ having the tibiæ elongate, with slight traces of two obtuse teeth on the outer margin, and one long spine on the underside, near the apex, projecting downwards; those of the ♀ shorter, more robust, and the tibiæ bidentate. Mesosternal process rounded in front, with the sides nearly parallel, moderate in size.

The nearest relationship of this genus appears to be with *Jummos*, W. W. Saund., although from the long and slender legs and colour of the only species known, it might seem to come near to *Dicronocephalus* of Hope. Its unarmed clypeus, character of fore tibiæ in ♂, and the resemblance of the females, are the reasons which induce me to place it immediately before *Jummos*, from which it is distinguished, as well as from *Rhomborhina* of

Hope, by the slender legs, shape of clypeus, and arming of the fore tibiæ in the ♂, as well as by the dull colour of the insect, which is very unusual among the Goliath beetles.

Cosmiomorpha modesta, mihi. (Pl. III. fig. 1 ♂; fig. 2 ♀.)

Head with the upper surface deeply punctate, pitchy black, with the antennæ dark chesnut brown. Thorax with the upper surface flat and deeply punctate, blackish brown, covered with short, stout, adpressed yellowish hairs, especially near the margin. Scutellum concolorous with the thorax, with patches on the basal angles of yellowish adpressed hairs. Elytra with two slightly elevated longitudinal ridges on each, parallel for the most part, but joining near the apex, the surface deeply and rugosely punctured, dark, dull, castaneous brown, with the suture and shoulders shining pitchy black; the whole surface covered with stout, adpressed, short yellowish hairs. Underside of body dark castaneous brown, thickly covered with yellowish hairs, except the mesosternal process and medial line of abdomen, which are smooth, shining, and slightly punctate. Legs dark castaneous brown, with the hinder tibiæ fringed with yellowish hairs. Tarsi elongate.

The ♀ is rather smaller than the ♂, and has the anterior angles of the clypeus less sharply truncate obliquely. In one specimen the colour is nearly black.

Length of ♂ 1 inch; ♀ of $\frac{9}{10}$ inch.

Fig. 1 *a*, maxilla ♂; fig. 1 *b*, mesosternum ♂; fig. 1 *c*, claws ♂; fig. 1 *d*, fore tibia and tarsus ♂; fig. 2 *a*, mandible ♀; fig. 2 *b*, maxilla ♀; fig. 2 *c*, mentum ♀.

In the collection of the British Museum, and ♀ also in my own.

Three specimens only of this insect were brought to England, one male and two females.

Rhomborhina nigra, mihi (Pl. III. fig. 3.)

Shining black. Clypeus large, somewhat broader in front and slightly rounded anteriorly, with an elevated rim, deeply punctate. Thorax with the hinder angles acute, the surface smooth and finely punctate. Scutellum moderate, the apex very acute and finely punctate. Elytra smooth, with the suture and two parallel equidistant longitudinal lines on each, very slightly elevated, finely punctate, shallowly emarginate behind the shoulders. Undersurface of body finely punctate, with apex of abdomen covered with brownish hair. Mesosternal process obtusely spatulate, rounded and broader in front, fringed with short hairs. Legs

striato-punctate, the fore posterior tibiæ fringed with yellowish hairs; fore tibiæ with one large tooth externally in the ♀, unarmed in the ♂. Tarsi short, robust.

Length $1\frac{1}{10}$ inch.

In the British Museum and other cabinets.

This species is a near ally to *R. hyacinthina* of Hope, which is rather common in collections from Sylhet and Assam, but is smaller, having the clypeus less broad in front, and without any trace of the hyacinthine hue, which the Indian specimens always possess on the legs and underside of the body, whatever may be the dark tone of colour of the upper surface. The mesosternal process is also much less broad, and spatulate. Fig. 3 *a*, mesosternal process.

Rhomborhina Fortunei, mihi. (Pl. III. fig. 4.)

Head with the sides of the clypeus parallel, the margin slightly elevated, the upper surface flat, and minutely punctured, with a slight rounded elevation between the eyes, dark blueish green. Antennæ and eyes pitchy brown. Thorax trapezoidal, with the upper surface uniformly and minutely punctate, bright uniform dark green. Scutellum large, trigonate, sparingly punctate, uniform in colour with the thorax. Elytra rather broader than the thorax, slightly emarginate behind the shoulders, without any trace of longitudinal ridges, and transversely marked with minute wavy striæ, dark shining green. Underside of body finely punctate, dark shining green, with the joints of the abdomen narrowly margined with black. Mesosternal process moderate, with the sides parallel, and the apex obtuse. Legs with the femora dark shining green, tinged with brown. Tibiæ and tarsi black, the former edentate in the ♂, in the ♀ with one strong tooth near the apex.

Length 1 inch.

In the British Museum and other cabinets.

Inhabits the borders of woods in the hill country.

This species, it appears, belongs to the section which includes *japonica, dives*, &c., and approaches nearest to the former species in general characters. Two specimens of the ♀, which I possess, have a slight golden tint on the elytra in certain lights. Fig 4 *a*, mesosternal process.

Tæniodera ornata, mihi. (Pl. III. fig. 5.)

Head with the clypeus broader anteriorly, emarginate, deeply and rugosely punctate, black, with two short longitudinal yellow lines near the eyes at the base. Antennæ castaneous brown. Eyes pitchy brown. Thorax much rounded in front, produced posteriorly into a central, slightly projecting lobe, deeply and rugosely punctate, black, with a long central golden yellow streak, and two elongate yellow spots on the outer margin. Scutellum black, moderate in size, with a broad golden yellow central streak. Elytra considerably broader than thorax, the shoulders prominent, narrower, and rounded at the apex, with a central longitudinal elevated rounded ridge on each elytron, and five or six thread-like, wavy, elevated lines between the ridge and the suture, and between the ridge and the lateral margin a reticulated surface of oblique, short, wavy raised lines; black, with the lateral margins, the apex, and anterior portion of the elevated ridges, bright castaneous brown, and having a golden yellow diamond-like marking on the centre of the suture, two rounded transverse spots between this marking and the apex, and two points on the lateral margin, all of a golden yellow colour. Legs black, shining, covered with castaneous hairs.

Length $\frac{6}{10}$ inch.

In the cabinet of the British Museum.

One specimen only of this species was taken by Mr. Fortune. It has a near relationship to some of the Indian species, both in shape and character of the colouring.

Protœtia intricata, mihi. (Pl. III. fig. 6.)

Head with the sides of the clypeus nearly parallel, the fore angles rounded, and the margin slightly elevated, deeply punctate, dark, bronzy green, more viridescent and shining in front. Antennæ and eyes pitchy black. Thorax rounded in front, with the posterior angles obtuse, and the basal margin receding near the centre to receive the scutellum, covered with broad shallow punctures, dark, bronzy brown, with two longitudinal rows of pale, irregular, yellowish spots, one on each side of the central line, between which and the outer margin are some faint, irregular, yellowish markings. Scutellum with the apex obtuse, dark, bronzy brown. Elytra rather broader than the thorax, deeply emarginate behind the shoulders, with two faint elevated longitudinal ridges, shallowly but broadly punctate, dark, bronzy

brown, with various yellowish speckle-like markings, and a transverse, wavy line of dots on each elytron of the same colour, nearly crossing the disk a little below the centre, between which and the apex is another transverse, somewhat lunate, dotted, line-like yellowish marking, nearly touching the suture. Underside of body bright shining green, with the joints of the abdomen spotted laterally with yellowish white. Podex with two converging rows of yellowish spots. Legs dark, bronzy-green, robust. The two posterior pairs rough, with deep punctures, and fringed with yellowish hairs.

Length $\frac{6}{10}$ inch.

In the British Museum and other cabinets.

This is a species resembling in some respects two or three others, but its characters are distinct and apparently constant.

Porphyronota Sinensis, mihi. (Pl. III. fig. 7.)

Head small, black, with a large patch on the after portion pale chesnut-brown. Antennæ of the same castaneous colour. Thorax rounded in front, with the sides nearly parallel, the hinder margin convex and emarginate to receive the scutellum, pale chesnut-brown, with two small round black spots immediately behind the head, and a black central × like marking on the posterior half of the disk, the upper portion of the × being in shape of a broad U, and the lower portion with a decided angular projection on either leg, and having also four rounded somewhat confluent spots on either side of the × like marking. Scutellum trigonate, chesnut-brown, with the apex and a discoidal spot black. Elytra broader than the thorax, slightly emarginate behind the shoulders, faintly furrowed longitudinally, chesnut-brown, with numerous short, black, line-like wavy markings, mostly dispersed transversely across the ridges, and two subquadrate black spots on the disk, a little below the centre. Podex black. Underside of body shining black, with the mesosternal process, a patch near the shoulders, and some spots on the side of the abdomen, castaneous brown. Legs robust, black.

Legth $\frac{7}{10}$ inch.

In the British Museum and other cabinets.

Taken in hedges by the roadside, generally in the valleys among the hills. It also occurs in the vicinity of Shanghai.

This species very closely resembles some members of the genus from South Africa, and it is curious to observe forms so closely allied in parts of the world so far apart.